

Maths



At Garstang Community Academy (GCA), we are passionate that all learners should be given the opportunity to experience a rigorously planned, robustly evaluated and challenging mathematics curriculum. We ensure that our learners are sufficiently supported to achieve these high expectations. We firmly believe that mathematical intelligence is expandable, and that every child can learn mathematics, given the appropriate learning experiences within and beyond the classroom. We will reflect our high expectations of each child through our curriculum, enabling them to master the key mathematical content appropriate for their age and ability.

Our curriculum has three key principles:

1. Fluency (Substantive knowledge)
2. Problem Solving (Disciplinary knowledge)
3. Reasoning and Justification (Disciplinary knowledge)

Our goal is simple; to ensure the best outcomes for all learners during their time at GCA, allow students to continue their studies beyond KS4, and to allow progression to university education therefore resulting in better life chances.

Nurture and Development

We believe that pupils should be encouraged to use technical language throughout their mathematical learning journey to deepen their understanding of logical concepts.

The way students speak and write about mathematics has been shown to have an impact on their success in mathematics. We therefore use a carefully sequenced, structured approach to introducing and reinforcing mathematical vocabulary throughout maths lessons, so students have the opportunity to work with word problems from the beginning of their learning. We believe that literacy, specifically reading, within mathematics is a key focus and we are intent on supporting the whole school reading/literacy policy within our curriculum.

By setting students fluidly based on ability and in parallel with another group, we can ensure that students are given more opportunity to flourish and to ensure that we do not cap opportunity for them, helping them to realise their talents. Students are encouraged to work independently, to develop confidence and resilience but also with other students to develop their communication and group working skills.

We believe that by using pictorial, concrete and abstract approaches to teaching mathematics, students can learn and develop by allowing them to look at real life concepts in a variety of ways and to provide them with transferable skills that will live with them. We constantly look for opportunities throughout the curriculum to interleave different concepts together.

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Academic Rigour

Mathematics is an academic subject and being able to reason, justify and problem solve is at the centre of what we do. Our aim is to have a curriculum that creates the optimal conditions for every student to learn a deeper, long lasting understanding of key mathematical concepts that they can apply to different situations. This is firstly through the teaching and learning of substantive knowledge of facts and process, and secondly through disciplinary knowledge skills of problem solving and reasoning. From the first lesson in year 7, we look to expand on the knowledge gained at KS2 through our sequence of lessons, ensuring that students are engaged with their learning. The building blocks that we put in place during KS3 are further enhanced in KS4, as we begin to consolidate and extend the understanding, skills, and processes to ensure curriculum progression and no loss of learning time. The additional time in KS4 allows us to consolidate KS3 knowledge and explore topics in a greater breadth and depth. We regularly revisit prior knowledge within units of work, to improve recall and retrieval, and to eliminate any misconceptions that may appear.

Social Action

Throughout our curriculum we aim to ensure that all learners gain a love and appreciation for mathematics. We understand that mathematics can often get negative press and can be found socially acceptable to be 'not good at maths', but we want to challenge this stigma and show the wonderful opportunities that come from mathematics and how it can help us see the world that we live in from a different viewpoint. Mathematics is a life skill and will be used by all during their life and career, supporting them into making the right decisions.

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